Agency: Commerce, Community and Economic Development
Grants to Municipalities (AS 37.05.315)
Grant Recipient: Skagway

Project Title: **Project Type:** Maintenance, Renovation and Repairs

Skagway - Municipal Wastewater Treatment Facility Improvements Due to Seasonal Cruise Impacts

State Funding Requested: $5,000,000 **House District:** 5 / C
One-Time Need

Brief Project Description:

CRUISE SHIP FUNDING SOURCE PROJECT
The Borough is pursuing retrofit of its Sewer Treatment Plant (STP) facility with installation of membrane bioreactor system.

Funding Plan:

Total Cost of Project: $5,000,000

	Funding Secured		Other Pending Requests		Anticipated Future Need	
	Amount	*FY*	*Amount*	*FY*	*Amount*	*FY*
State Funds					$5,000,000	
Total					$5,000,000	

Detailed Project Description and Justification:

CRUISE SHIP FUNDING SOURCE PROJECT

The Municipality of Skagway was issued a notice of violation by the Environmental Protection Agency this year because our current facility is unable to handle the great demands being placed on it during the summer season by cruise related visitors. We are seeking to address the EPA's concerns, but it is clearly apparent that more work needs to be done to wastewater treatment infrastructure.

The Borough is pursuing retrofit of its Sewer Treatment Plant (STP) facility with installation of membrane bioreactor system that will solve the issues of regulatory compliance once and for all. The primary load on the STP is from the influx of summer cruise ship visitors and temporary staff hired to work during the summer season.

Project Timeline:

The Borough believes the use of the regional passenger vessel excise tax fund would be very appropriate for this project. Borough staff will be issuing a request for proposals to cover engineering design of this project soon. Expenditures would be complete by the end of the 2009 calendar year.

Entity Responsible for the Ongoing Operation and Maintenance of this Project:

The Municipality of Skagway

For use by Co-chair Staff Only:

4:17 PM 4/29/2009

Contact Name: Kaci Schroeder Hotch
Contact Number: 465-3732

Grant Recipient Contact Information:

Name:	Alan Sorum
Address:	P. O. Box 415
	Skagway, AK 99840
Phone Number:	(907)612-0166
Email:	a.sorum@skagway.org

Has this project been through a public review process at the local level and is it a community priority? [X] Yes [ ] No

Contact Name: Kaci Schroeder Hotch
Contact Number: 465-3732

For use by Co-chair Staff Only:

4:17 PM 4/29/2009

FY10 Capital Project Request Form for District: C HD 05
Please send copies to the office of: Senator Kookesh and Representative Thomas

Grant recipient name (ie. Name of Municipality, School District or Organization**):**
Municipality of Skagway

Physical location of project (community name**): Skagway**

Project Title (should clearly state what the project is**): Improvements to Wastewater Treatment Facilities**

Brief Description of Project (1 or 2 sentences**):** The Borough is pursuing retrofit of its Sewer Treatment Plant (STP) facility with installation of membrane bioreactor system.

Total Cost of Project from Inception to Completion: $5 million
(Total should equal the funding request from the State and funding sources secured, requested or needed listed below**)**

State Fiscal Year 2010 Funding Request from the State: $5 million

If you project is funded this year, will you be requesting state funding again? Yes_____ No X

Funding Plan:
***Please list any funding already secured, as well as the year it was secured*:**

Funding Source	Amount Secured	State Fiscal Year
Federal Funds		
State Funds		
Denali Commission		
Rasmusson Foundation		
Local Funds		
Other Funds (explain)		

***Please list any non-state funding currently requested but not yet secured*:**

Funding Source	Amount Requested	State Fiscal Year
Federal Funds		
Denali Commission		
Rasmusson Foundation		
Local Funds		
Other Funds (explain)		

***If you need additional funding to complete this project, please indicate below from whom you intend to secure that funding*:**

Funding Source	Amount Needed	State Fiscal Year
Federal Funds		
Denali Commission		
Rasmusson Foundation		

Improvements to Wastewater Treatment Facilities

Funding Request: $5 million

Project Description: The Municipality of Skagway was issued a notice of violation by the Environmental Protection Agency this year because our current facility is unable to handle the great demands being placed on it during the summer season by cruise related visitors. We are seeking to address the EPA's concerns, but it is clearly apparent that more work needs to be done to wastewater treatment infrastructure.

The Borough is pursuing retrofit of its Sewer Treatment Plant (STP) facility with installation of membrane bioreactor system that will solve the issues of regulatory compliance once and for all. The primary load on the STP is from the influx of summer cruise ship visitors and temporary staff hired to work during the summer season.

Cost Estimates: The Borough believes the use of the regional passenger vessel excise tax fund would be very appropriate for this project. Borough staff will be issuing a request for proposals to cover engineering design of this project soon. Estimated cost of construction is $5 million.

In-Kind Contributions: The Borough will be contributing local funds to the project for design, engineering, and contruction.

Facility Maintenance: The Municipality of Skagway operates its wastewater department as an enterprise fund. Customers are responsible for the total cost of routine operation and maintenance of the municipal wastewater system. While this project represents an extraordinary cost with its initial construction, the utility would have no problem bearing the cost of routine operation and maintenance once the project is completed. The State would bear no maintenance responsibilities.

Project Contact:
Alan Sorum – Borough Manager
City of Skagway
Post Office Box 415
Skagway, Alaska 99840

Please describe the project time-line and when expenditures will occur: Local funding has been committed to design and engineering of the project. The work will be bid ready by July of 2009 and the project could be completed by the end of the year if funding is secured.

Who will be responsible for providing the ongoing maintenance and operation costs? The Municipality of Skagway operates its wastewater department as an enterprise fund. Customers are responsible for the total cost of routine operation and maintenance of the municipal wastewater system. While this project represents an extraordinary cost with its initial construction, the utility would have no problem bearing the cost of routine operation and maintenance once the project is completed. The State would bear no maintenance responsibilities.

Grant Recipient Contact Information:

Contact Name: Alan Sorum
State Tax ID Number: EIN 92-6000088
Phone Number: 907-983-2297
Mailing Address: Box 415 Skagway, AK 99840

E-Mail: a.sorum@skagway.org

Has the project gone through a public review process at the local level and is it a community priority by resolution or other official action by the governing body?

YES X NO_____

You must provide documentation. (ie. Copy of resolution and/or appropriate letter(s) of support)

If your project request has not gone through a public and/or governing or appropriate review process for your community or school district then it may not make it through the Legislative process of approval.

If this form is missing information that is not provided in a timely manner, your request will not be able to be included in the FY10 capital project funding requests as we will not have the information needed to fully support your project should there be questions our office may be asked to answer regarding your project.

Proposed by:	Administration
Vote: 6 Aye	0 Nay 0 Absent

MUNICIPALITY OF SKAGWAY, ALASKA

RESOLUTION NO. 2008-21R

A RESOLUTION OF THE MUNICIPALITY OF SKAGWAY, ALASKA DESIGNATING IMPROVEMENTS TO ITS WASTEWATER TREATMENT FACILITIES AS THE COMMUNITY PRIORITY PROJECT FOR FUNDING FROM THE STATE OF ALASKA REGIONAL COMMERCIAL PASSENGER VESSEL EXCISE TAX IMPACT FUND.

WHEREAS, The Municipality of Skagway has a resident population of 846 people and yet accommodates more than eighty percent of all cruise ship based passengers visiting Alaska; and

WHEREAS, The impact of more than 800,000 visitors each year severely strains the capability of the current wastewater treatment infrastructure found within the community; and

WHEREAS, The community wishes to address concerns the U.S. Environmental Protection Agency has with the current wastewater treatment facility; and

WHEREAS, The Municipality of Skagway wishes to pursue retrofit of its treatment facility with installation of membrane bioreactor system that will solve issues of regulatory compliance going well into the future; and

WHEREAS, The primary load on the community wastewater treatment facility is caused by the influx of summer cruise ship visitors and temporary staff hired to work during the summer season; and

WHEREAS, The cruise industry is a major economic driver for Alaska and the direct connection of this effort to cruise ship passengers makes use of the Regional Commercial Passenger Vessel Excise Tax Fund a very appropriate funding source for this project;

NOW THEREFORE BE IT RESOLVED, that the Municipality of Skagway Borough Assembly has designated Improvements to its Wastewater Treatment Facilities as the Community Priority Project for funding from the State of Alaska Regional Commercial Passenger Vessel Excise Tax Fund and urges the Legislature to provide funding in the amount of $5 million for this effort.

PASSED AND APPROVED this 6th day of November, 2008 by the Borough Assembly of the Municipality of Skagway, Alaska.

Thomas D. Cochran, Mayor

ATTEST:

Marjorie D. Harris, Borough Clerk

(SEAL)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

Reply To: OCE-133

JUN - 5 2008

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

NOTICE OF VIOLATION

RECEIVED
JUN 10 2008
MUNICIPALITY OF SKAGWAY

The Honorable Thomas D. Cochran
Mayor of Skagway
P.O. Box 415
Skagway, Alaska 99840

cc mayor & Tmi Gladden

Re: City of Skagway Wastewater Treatment Plant
NPDES Permit #AK-002001-0

Dear Mayor Cochran:

On August 6, 2002, the U.S. Environmental Protection Agency (EPA) re-issued a National Pollutant Discharge Elimination System (NPDES) Permit to the City of Skagway, Alaska (City) wastewater treatment facility (Facility), NPDES Permit No. AK-002001-0 (Permit). The purpose of this letter is to notify you of violations that EPA discovered after reviewing the Discharge Monitoring Reports (DMRs) submitted by the City and during an inspection of the Facility.

REVIEW OF FACILITY DMRS

EPA has reviewed the DMRs from December 2005 to February 2008 and identified effluent limitation exceedances that constitute more than 611 violations of the Clean Water Act, 33 U.S.C. § 1251 *et seq.* A list of these violations is enclosed (see Enclosure A).

JULY 2007 INSPECTION

EPA also conducted an inspection of the Facility on July 9, 2007. The purpose of the inspection was to gather information regarding the City's operation of the Facility as part of an overall and ongoing evaluation of the Permit compliance status of the Facility.

The following violations were noted during the inspection:

VIOLATIONS

1) Part I.B.2 of the Permit specifies that the permittee shall submit to EPA by January 10 of each year an annual written report covering the previous calendar year. The annual report shall contain summaries of the receiving water quality monitoring data, and any biological monitoring if required in the previous year. In addition to summarizing the data, the permittee shall also evaluate and interpret data in relation to the magnitude and ecological significance of observed changes in the parameters measured. Potential changes in water quality, sediment chemistry, and biological parameters over time and with distance from

the outfall, shall be addressed. All reports will address compliance with water quality standards by using appropriate descriptive and statistical methods to test for and to describe any impacts of the effluent on water quality. According to the operator, Mr. Tim Gladden, annual reports have not been prepared and submitted to EPA. To date, EPA has not received annual reports for 2003-2007. This is a violation of Part I.B.2 of the Permit.

2) Part I.D of the Permit specifies that the permittee shall review and if necessary update its public education program regarding nonindustrial source control. The program shall address such issues as:

- development and distribution of information containing nonhazardous alternatives to hazardous household products and pesticides.
- proper disposal of hazardous wastes including disposal guidelines specifying what toxic pollutants can and cannot be discharge to the sewer system.

This information shall be advertised in the local newspaper by June 15 of alternate years starting one year after permit issuance (i.e., June 15, 2004, June 15, 2006, and June 15, 2008). In addition, the City shall submit a report annually with the December DMR summarizing the actions undertaken during the previous year to control nonindustrial sources of toxic pollutant and pesticides. The inspector noted that the City does not advertise in the local newspaper and has not submitted an annual report regarding this program. These conditions are violations of Part I.D of the Permit.

3) Part I.F of the Permit specifies that within 180 days of the effective date of the Permit, the permittee shall review/develop and implement its operation and maintenance (O&M) Plan and ensure it includes appropriate best management practices (BMPs). BMPs shall include measures which prevent or minimize the potential for the release of pollutants to the surface water. The description of BMPs shall address, to the extent practicable, the following minimum components:

a. Spill prevention and control;
b. Optimization of chemical usage;
c. Preventive maintenance program;
d. Minimization of pollutant inputs from industrial users;
e. Research, develop and implement a public information and education program to control the introduction of household hazardous materials to the sewer system; and
f. Water conservation.

At the time of the inspection, no O&M plan had been developed. This is a violation of Part I.F of the Permit.

4) Part II.B of the Permit requires that monitoring must be conducted in accordance with EPA approved methods which include specific sampling containers, preservatives and holding times for each analysis. Furthermore, Part III.E of the Permit specifies that the permittee shall at all times properly operate and maintain all facilities and systems of treatment and control. Proper operation and maintenance also includes adequate laboratory controls and quality assurance procedures. Based on the chain-of-custody forms, the inspector noted that the temperature of samples received by the City's contract laboratory exceeded 4°C. This is a violation of Parts II.B and III.E of the Permit. In addition, failure to follow EPA

approved methods may yield sample results that are not representative of the volume and nature of the monitored discharge. Nonrepresentative sampling is a violation of Part II.A of the Permit.

Although EPA's goal is to ensure NPDES facilities comply fully with their permits, the ultimate responsibility rests with the Facility. As such, I want to strongly encourage you to continue your efforts to maintain full knowledge of the Permit requirements, and other appropriate statutes, and to take appropriate measures to ensure compliance. Notwithstanding your response to this letter, EPA retains all rights to pursue enforcement actions which may include monetary penalties to address these and any other violations.

Should you have any questions or comments regarding this letter, please feel free to contact David Domingo, Compliance Officer, at (206) 553-0531.

Sincerely,

Michael A. Bussell, Director
Office of Compliance and Enforcement

Enclosure

cc: Tim Gladden, Operator
Chris Foley - ADEC, Juneau

ENCLOSURE A—PERMIT VIOLATIONS – AK-002001-0 (Skagway, AK)

Month	Pollutant	Effluent Limitation	Value Reported in DMR	Limit Type
April 2006	BOD percent removal	30%	17%	Monthly Average
April 2006	BOD	100 mg/l	159 mg/l	Daily Maximum
April 2006	BOD	80 mg/l	124.5 mg/l	Monthly Average
May 2006	BOD percent removal	30%	14%	Monthly Average
June 2006	fecal coliform	1,000,000 / 100 ml	2,235,000 / 100 ml	Monthly Average
June 2006	fecal coliform	1,500,000 / 100 ml	3,100,000 / 100 ml	Daily Maximum
August 2006	BOD percent removal	30%	26%	Monthly Average
August 2006	fecal coliform	1,000,000 / 100 ml	4,800,000 / 100 ml	Monthly Average
August 2006	fecal coliform	1,500,000 / 100 ml	7,100,000 / 100 ml	Daily Maximum
August 2006	BOD	140 mg/l	169 mg/l	Monthly Average
August 2006	BOD	200 mg/l	231 mg/l	Daily Maximum
October 2006	BOD percent removal	30%	22%	Monthly Average
October 2006	BOD	100 mg/l	406 mg/l	Daily Maximum
October 2006	BOD	80 mg/l	227.35 mg/l	Monthly Average
November 2006	BOD percent removal	30%	-13%	Monthly Average
April 2007	BOD	100 mg/l	125 mg/l	Daily Maximum
April 2007	BOD	80 mg/l	112.3 mg/l	Monthly Average
June 2007	fecal coliform	1,000,000 / 100 ml	1,250,000 / 100 ml	Monthly Average
July 2007	BOD	140 mg/l	142.5 mg/l	Monthly Average
July 2007	fecal coliform	1,000,000 / 100 ml	1,800,000 / 100 ml	Monthly Average
July 2007	fecal coliform	1,500,000 / 100 ml	1,800,000 / 100 ml	Daily Maximum
August 2007	BOD	140 mg/l	145 mg/l	Monthly Average
August 2007	fecal coliform	1,000,000 / 100 ml	2,145,000 / 100 ml	Monthly Average
August 2007	fecal coliform	1,500,000 / 100 ml	2,400,000 / 100 ml	Daily Maximum
September 2007	BOD	140 mg/l	144.5 mg/l	Monthly Average
September 2007	BOD	200 mg/l	158 mg/l	Daily Maximum
September 2007	fecal coliform	1,000,000 / 100 ml	11,000,000 / 100 ml	Monthly Average
September 2007	fecal coliform	1,500,000 / 100 ml	11,000,000 / 100 ml	Daily Maximum
October 2007	BOD	100 mg/l	128 mg/l	Daily Maximum
October 2007	BOD	80 mg/l	97.85 mg/l	Monthly Average
January 2008	BOD percent removal	30%	-11% [1]	Monthly Average

[1] Based on reported monthly average influent and effluent concentrations.

Skagway Improvements to Wastewater Treatment Plant - Membrane Bioreactors

The Municipality of Skagway has long had problems with its wastewater treatment plant. Its most recent violation notice from the Environmental Protection Agency (EPA) was received on June 5, 2008. Many of the issues in the EPA complaint stem from the difficulty the Municipality has had with the agency. The greater issue for the community is the existing facility's ability to cope effectively with the massive influx of visitor that arrive each summer.

The permanent resident population of Skagway is just over 800 people. In the brief summer tourism season that lasts for about five months, more than a thousand temporary workers arrive in town and over 800,000 cruise ship passengers disembark at in Skagway. On a busy day, there can be four large cruise ship moored at the dock and often there are smaller cruise vessels and a state ferry in port during the same period of time. It is realistic to expect 10,000 people to visit the community in one day.

This influx of cruise ship passengers creates the problems experienced by the wastewater treatment plant. The facility does not effectively handle the surge in volume caused by the increase in traffic. An initial problem the facility had was excessive numbers of E. coli bacteria being present at the discharge point. A new chlorination system was engineered, purchased and installed that now solves this problem and created a new one. Regulations require the chorine be neutralized before the treated effluent is discharged. The chemical used in this process falsely impacts readings on biological oxygen demand that furthers the EPA violation problems experienced in the facility.

The solution for the wastewater treatment plant is a retrofit that adds an additional level of treatment to the effluent using a membrane bioreactor system. This retrofit would solve problems in community with wastewater treatment now and for the future. We don't believe any community in Alaska is seeking to raise their wastewater treatment to this standard.

Membrane bioreactors (MBR) combine activated sludge treatment with a liquid/solid separation process that uses a membrane filter. The ultra filtration membrane eliminates clarification and tertiary filtration of wastewater. The membrane is immersed in an aeration tank that overcomes the problems associated with poor settling in a conventional activated sludge system that is overloaded by peak volumes of effluent. The technology allows the wastewater treatment plant to handle effluent that is carrying higher than normal levels of suspended solids. Membrane bioreactors are very effective at removing both soluble and particulate biodegradable material a higher load rates. MBR systems also ensure better nitrification in cold weather environments. Initial construction costs of MBR systems are high, but the technology is giving a level of acceptance.

MBR systems have a small footprint and are known for producing a high quality effluent that is reused in many regions. A complete system can be dropped into a treatment cell in the existing wastewater treatment plant. The Municipality has moved forward with a request for engineering design and hopes to complete the project pending funds in this calendar year.